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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/594,621	06/15/2000	James M. Souza	00PAT16	9666

7590

05/16/2003

Ronald B Sefrna  
Sefrna & Associates  
505 South Bois D'Arc  
P O Box 567  
Tyler, TX 75710

EXAMINER

BOYD, JENNIFER A

ART UNIT	PAPER NUMBER
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1771

4

DATE MAILED: 05/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-4

**Office Action Summary**

Application No.

09/594,621

Applicant(s)

SOUZA ET AL.

Examiner

Jennifer A Boyd

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12 and 17 is/are allowed.
- 6) ☒ Claim(s) 1, 3, 21 and 25 is/are rejected.
- 7) ☒ Claim(s) 2, 4 - 11, 13 - 16, 18 - 20 and 22 - 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. The Applicant's Amendments and Accompanying Remarks, filed February 28, 2003, have been entered as Paper No. 3 and have been carefully considered. The Specification and Abstract have been amended. Claims 7, 9, 12 and 17 have been amended and claims 1 – 25 are pending. In view of the Applicant's Arguments, the Examiner withdraws the U.S.C. 102(b) rejection of claims 1 – 6 and 21 - 25 as being anticipated by Sturgeon (US 3,778,334) as set forth in paragraph 2 of Paper No. 2. In view of Applicant's Arguments, the Examiner withdraws the 35 U.S.C. 103(a) rejection as being unpatentable over Sturgeon (US 3,778,334) in view of Drosthalm et al. (US 4,081,302) of claims 7 – 20 as set forth in paragraphs 3 - 4 of Paper No. 2. After an updated search, additional prior art was discovered that appears to render claims 1, 3, 21 and 25 as currently claimed unpatentable.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 102***

3. Claims 1, 3, 21 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Zweben et al. (US 4,888,247).

Zweben is directed to a low-thermal-expansion, heat conducting laminates having layers of metal and reinforced polymer matrix composite.

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Zweben teaches a heat conducting laminate having at least one layer of metal and at least one layer of polymer matrix composite material having low-thermal-expansion reinforcing material distributed throughout and embedded therein (Abstract). In Figures 2 – 5, the laminates are composed of alternating layers of metal and polymer matrix composite material. The layer of metal, equated to Applicant's "elongate generally planar detectable ply", can be in the form of a sheet, film or foil (column 5, lines 63 – 67). The metals used in the laminate generally include aluminum, copper, silver, nickel, titanium, iron, gold, tin, beryllium, magnesium, lead and various alloys such as iron-nickel, iron-nickel-cobalt and the like (column 6, lines 9 – 14). The layer of polymer matrix composite material, equated to Applicant's "first and second generally planar plies", can be in the form of particles, powders, whiskers, fibers, woven fabrics, non-woven mats or any other woven or non-woven form of fiber or any combination of the forgoing (column 9, lines 63 – 67). The reinforcing inorganic fibers include carbon, graphite, alumina and silicon carbide (column 10, lines 15 – 25), which are known in the art to be high tensile strength materials. The laminate is cured by well-known curing techniques (column 13, lines 60 – 63).

*Allowable Subject Matter*

4. Claims 12 and 17 are allowed.
5. Claims 2, 4 – 11, 13 – 16, 18 – 20 and 22 – 24 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

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6. The following is an examiner's statement of reasons for allowance: Although Zweben et al. (US 4,888,247) and Sturgeon (US 3,778,334) are considered to be the most pertinent prior art, they fail to teach or suggest the use of a magnetically detectable open mesh, perforated sheet, plurality of thin narrow bands, and multiplicity of discrete particles of a ferrous metal in the structural composite. They fail to teach or suggest an interlock means forming a mechanical lock between faces during application of the device to a structural member. They fail to teach or suggest an alignment means for the purpose of aligning successive layers of the device during application of the device to a structural member.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### ***Response to Arguments***

7. Applicant's arguments with respect to claims 1, 3, 21 and 25 have been considered but are moot in view of the new ground(s) of rejection.

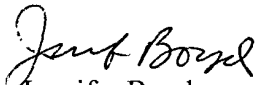
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A Boyd whose telephone number is 703-305-7082. The examiner can normally be reached on Monday thru Friday (8:30am - 6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone numbers for

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the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

  
Jennifer Boyd  
May 8, 2003

  
TERREL MORRIS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700